

Common oral health issues faced by the undergraduate students of Dayalbagh Educational Institute, Agra

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Abstract

Background: Oral diseases are the major public health problem that causes discomfort and suffering which can impair the function and quality of life. Dental caries and periodontitis are the most prevalent oral diseases that lead to loss of teeth. People still consider oral health lesser than general health also they are not fully aware of budding oral diseases. Thus, the present survey was organized among university students to identify the burden of oral diseases, so that preventive measures and awareness programs can be conducted.

Method: Cross-sectional Survey was organized to assess the common oral health issues among university students. A simple random sampling method was used and 495 students were selected of which 169 were boys and 326 were girls as a sample for the study.

Result: The results of the study showed that approximately 30% of students experienced oral pain within 12 months and, around 30% of students reported swollen and bleeding gums occasionally and 20% of

students always feel tensed because of their condition of teeth. Results of the study also state that with an increase in age, the incidence of oral diseases also increases, however, based on gender, no significant difference was obtained for the occurrence of oral diseases.

Conclusion: Oral diseases harmfully affect attentiveness, interpersonal link, and efficiency due to the complicated relationship between oral health and general health. The present study identified the most common oral health issues faced by youngsters; thus, an oral health education program should be conducted to increase awareness about diseases that cause discomfort and pain in the oral cavity.

Keywords: Oral health, Oral diseases, Oral problems, Oral health care, Oral pain

Introduction

According to the definition given by the World health organization “Oral health is a state of being free from chronic mouth and facial pain, oral and throat cancer, oral sore, birth defects such as cleft lip and palate,

periodontal diseases and other diseases and disorders that affect the oral cavity”.[1] Oral health is linked to general health as it is one of the causes for aggravating or initializing non-communicable diseases such as diabetes, heart problem, rheumatoid arthritis, pre-term deliveries, and low birth weight babies.[2]

Due to the high prevalence and incidence rate of Oral diseases; they are termed as major public health problems globally especially for the people who belong to the low socio-economic group that causes discomfort and suffering which in turn impair the function and quality of life.[3]

In entire life, teeth and oral cavity are open to many environmental factors that may lead to disease or even tooth loss. Cavity and periodontitis are the most common oral diseases, with almost every person experiencing poor oral health at least suffers once in their lifetime, however, they are largely avoidable.[4]

The present study was designed to study common oral problems among university students i.e. youth who are the future of the country. Sound general health along with sound oral health is essential for their success as well as for the growth and development of the country.

The findings of the study will be beneficial in identifying the burden of common oral health problems in young adults so that preventive measures such as oral health awareness programs as well as improvements can be done in dental care facilities.

Objective

Common oral health issues faced by the undergraduate students of Dayalbagh Educational Institute, Agra.

Research Methodology

A cross-sectional survey was organized to assess the self-perception of common oral health issues faced by students of Dayalbagh Educational Institute, Agra.

Dayalbagh Educational Institute consists of five faculties. A list of undergraduate students was obtained from each faculty office. In each faculty, by using simple random sampling, every alternate undergraduate student was selected as a sample for the study. Total sample size was of 495 students in which 169 were boys and 326 were girls. A part of Oral health questionnaire by World health organization (2019) [5] was adapted. Permissions from respective faculties and from the ethical committee of the Dayalbagh Educational Institute, deemed to be university, Agra was obtained as well as consent were also taken from the participating students. Cross-sectional survey was organized in the form of questionnaire to be filled by the students in the classroom during free period. Overall time taken by students of each faculty was 45 minutes. All the participants filled the requested form i.e., response rate was 100%.

Result and Discussion

Data were collected and analyzed through student t-test. Collected data are presented as tables and graphs.

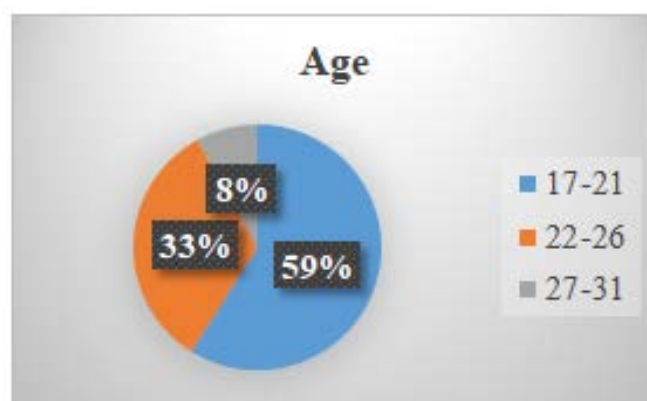


Figure 1: Distribution of students according to age
As shown in figure 1, all undergraduate students were divided into 3 groups. Overall, 59% students were belonged to 17-21-year group, 33% students were belonged to 22-26-year group and 8% students were belonged to 27-31-year group.

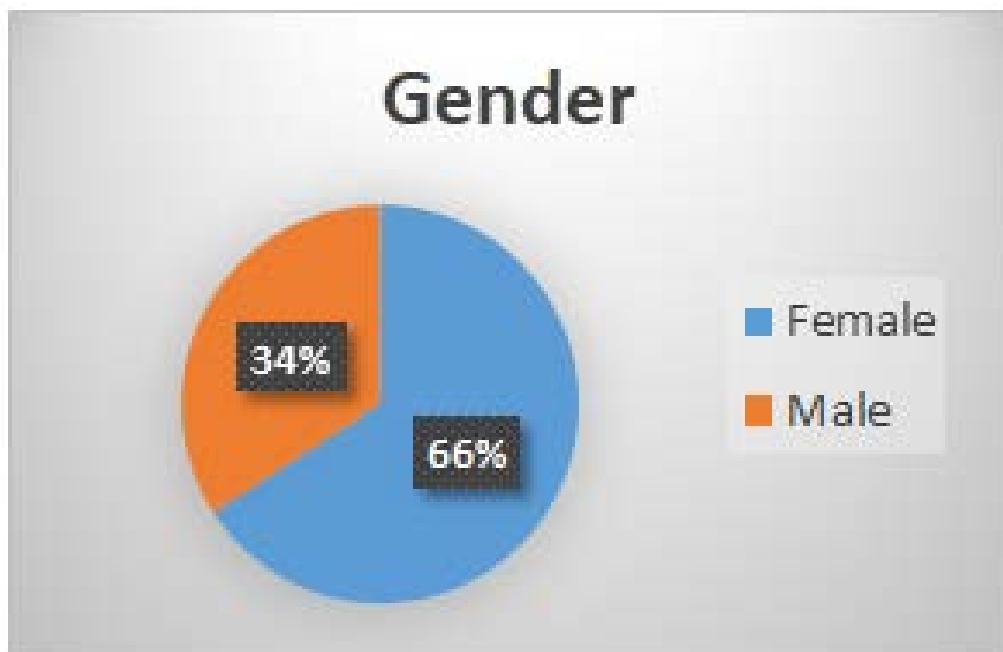


Figure 2: Distribution of students according to gender

As shown in Figure 2, based on gender, 66% students were girls and 34% were boys.

Table 1: Percentage of students reported condition of their teeth and gingiva

State of teeth and gingiva	Boys N=169		Girls N=326		TotalN=495	
	Teeth	Gingiva	Teeth	Gingiva	Teeth	Gingiva
Good	72	66	89.71	93.87	80.44	79.46
Poor	28	34	10.20	6.12	19.19	20.20
Don't know	0	0	0	0	0	0

As shown in table 1, overall, 28% boy respondents and 10% girl respondents has reported poor condition of their teeth while 34% boy respondents and 6% girl respondents has reported poor condition of their gingiva. Overall, 20% respondents reported poor state of their teeth and gingiva. Dental caries and periodontal diseases are the most prevalent diseases among all oral diseases globally as well as in India that are primary factor for

tooth loss. Dental caries and Periodontal diseases are caused due to bacterial colonialization in the dental plaque present over the tooth surfaces that lead to dissolution of the calcified tissues of the tooth causing dental caries as well as pathogenic microorganism also cause inflammation into the attached gingival tissue that cause gingival diseases. In absence of good oral care habits gingival diseases lead to periodontal diseases.^[6]

Table 2: Problems faced by the students due to state of teeth and gingiva in last 12 months

Problems faced by students	Often	Sometimes	Never
Difficulty in biting food	6.06	10.10	83.36
Difficulty chewing food	5.05	12.12	82.48
Difficulty in speech/pronunciation of words	5.05	20.2	74.39
Dry mouth	5.05	32.32	62.26

Felt Embarrassment due to appearance of teeth	5.05	13.13	81.39
Remain tensed because of problems in teeth or mouth	5.05	21.21	73.33
Avoids smiling because of teeth	4.04	8.08	87.87
Sleep is often interrupted	3.03	13.13	83.41
Affecting normal daily routine	2.02	9.09	88.88
People are less tolerant to you	2.02	13.13	84.44
Reduced participation in social activities	6.06	10.10	83.41

As shown in table 2, about 6.06% students reported difficulty in biting food frequently while 10.10% students reported difficulty in biting food sometimes. Only 5.05% students reported difficulty in chewing food frequently while 12.12% students reported difficulty in chewing sometimes. About 5.05% students reported difficulty in speaking frequently while 20.20% students reported difficulty in speaking sometimes. Only 5.05% students reported dry mouth frequently while 32.12% reported dry mouth sometimes. About 5.05% students reported that they feel embracement due to appearance of teeth frequently while 11.11% students reported embracement due to appearance of teeth sometimes. About 5.05% students reported tension because of teeth frequently while 21.21% students reported tension because of teeth sometimes. 4.04% students reported that they avoid smiling because of teeth frequently while 8.08% students reported that they avoid smiling because of teeth sometimes. Only 3.03% students reported that their sleep is often interrupted frequently while 13.13%

students reported that their sleep is interrupted sometimes. Only 2.02% students reported that they have difficulty doing usual activities frequently while 9.09% students reported that they have difficulty doing usual activities sometimes. About 2.02% people reported that they are less tolerant to people frequently while 13.13% people reported that they are less tolerant to people sometimes. About 6.06% students reported that they reduced participation in social activities frequently while 10.10% students reported they reduced participation in social activities sometimes. Other common oral issues faced by people are Malocclusion, dry mouth and fluorosis which further enhance the occurrence of dental caries and periodontitis. Dental caries progress deep in dental tissues lead to endodontic lesions that causes pain in oral cavity. Approximately 25% students reported pain in oral cavity in last 12 months, this is may be due to dental caries progression deep into dental tissue or may be due to inflamed gingiva.

Table 3: Percentage of students reported pain in oral cavity within 12 months

Pain in oral cavity	Boys (N=169)		Girls (N=326)		Total N=495	
	Number	%	Number	%	Total	%
Yes	54	32	53	16.32	107	24.24
No	111	66	27	8.16	138	37.37
Don't remember	4	2	246	75.51	250	38.38

As shown in table 3, overall, 24.24% students reported that they felt pain within 12 months. Data states that

32% male students felt pain within 12 months whereas 16.32% female students reported pain within 12 months.

Table 4: Percentage of students reported problems related to gingiva

	Occurrence of Problems	Bleeding gums	Tender gums	Swollen gums
Boys N=169	Frequently	4	10	12
	Occasionally	36	6	52
	Never	60	84	36
Girls N=326	Frequently	0	8.16	8.16
	Occasionally	14.28	8.16	6.12
	Never	85.71	83.67	85.71
Total N=495	Frequently	2.02	9.09	10.1
	Occasionally	25.25	7.07	29.29
	Never	72.72	83.83	60.60

As shown in table 4, overall, 9.01% students reported tender gums frequently, 10.1% students reported swollen gums frequently and 2.02% students reported bleeding gums frequently. Over all 25.25% students reported bleeding gums occasionally, 29.29% students reported swollen gums occasionally and 7.07% students reported

tender gums occasionally. Sign and symptoms of inflamed gingiva are swollen gums, bleeding gums and tender gums.^[7] Those students who reported these sign and symptom frequently or occasionally indicate the possibility of periodontitis or gingivitis.

Table 5: Risk of Oral diseases based on age

S.N		Number	Mean	S.D*	t-score	Significance
1	17-21	292	20.05	3.01	2.58	S [†] (0.01)
	22-26	163	22.45	5.07		
2	22-26	163	22.45	5.07	1.14	NS [‡]
	27-31	40	24.12	3.39		
3	17-21	292	20.05	3.01	3.21	S [†] (0.01)
	27-31	40	24.12	3.39		

S.D* - Standard deviation, S[†]= significant NS[‡]= Not significant

As shown in table 5, there is significant difference in mean scores of problems reported by 17-21 year and 22-26-year and 27-31-year age group but no significant difference in 22-26 year and 27-31-year age group. Present study indicated increase in oral problems with age.

With increasing age, incidence of periodontitis increases. Chronic periodontitis is more common in older population but acute periodontitis is not related to age.^[8] Aging is natural process, with increasing age, thinning of epithelial cells of the body starts. Same with the cells of the Periodontium thus it is unable to fight bacteria present in plaque. Similar results were obtained in present study.

Table 6: Risk of Oral diseases based on gender

Gender	Number	Mean	S.D	t-score	Significance
Male	169	20.70	3.38	1.003	NS ‡
Female	326	21.78	4.49		

S.D*- Standard deviation NS ‡- Not significant

As shown in table 6, there is no significant difference obtained in mean scores of oral problems between male and female students.

Gender is one of the factors which can modify or change the result of diseases. In females during puberty, pregnancy, mensuration and menopause, hormonal (Estrogen, Gonadotropin, Progesterone) level change that led to oral problems such as gingivitis and periodontitis. Other than that alveolar bone density is also less in females.^[9] Although in present study no significant difference were obtained but mean score of females were higher than male respondents.

Conclusion

Oral diseases harmfully affect attentiveness, interpersonal link and efficiency due to the complicated relationship between oral health and general health. Oral diseases can be prevented by maintaining proper oral health measures which include brushing, flossing, visits to dentist and proper diet. Proper oral health measures among Medical and Dental line and other health workers certainly influence the community.^[10]

Present study identified the common oral health issues faced by youngsters, thus Oral health education is desirable to increase the awareness about diseases that cause discomfort and pain in oral cavity. Individuals are more liable to seek treatment when they are aware of its existence.^[11]

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References

1. WHO. (2012). Oral Health. Oral Health. <https://doi.org/10.1377/hlthaff.2016.1489>
2. Singh, A. B., Prasuma, I., Mehra, P., & Rasania, S. (2018). Common Oral Health Problems and Related Health Seeking Behavior among Young Adolescents in an Urban Resettlement Colony, East Delhi, India. *Indian Journal of Youth and Adolescent Health*, 05(03), 6–11.
3. World Health Organization. (2003). The World Oral Health Report 2003. *Community Dentistry and Oral Epidemiology*, 31 Suppl 1, 3–23.
4. Ganavadiya, R., Chandrashekar, B., Goel, P., Hongal, S., & Jain, M. (2014). Mobile and portable dental services catering to the basic oral health needs of the underserved population in developing countries: a proposed model. *Annals of Medical and Health Sciences Research*, 4(3), 293–304.
5. WHO. (2019). Oral Health Questionnaire for Adults. Retrieved from https://www.who.int/oral_health/publications/pepan_nex7sohqbasicmethods.pdf
6. Plessas, A. (2014). Nonsurgical periodontal treatment: review of the evidence. *Oral Health and Dental Management*, 13(1), 71–80.
7. Nation institute of health. (2012). Periodontal (Gum) Disease. U.S department of health and human services. NIH publication. Retrieved from <http://www.nidcr.nih.gov/>

8. Tawse-smith, A. (2007). Age and oral health: current considerations Edad y salud oral: consideraciones actuales. *Braz Oral Res*, 21(13), 29–33.
9. Alam, N., Mishra, P., & Chandrasekaran, S. C. (2012). Gender basis of periodontal diseases. *Indian Journal of Basic and Applied Medical Research*, 1(2), 128–135.
10. Azodo, C. C., & Unamatokpa, B. (2012). Gender difference in oral health perception and practices among Medical House Officers. *Russian Open Medical Journal* 2012, 1, 1–5.
11. Brady, W. (1984). Periodontal disease awareness. *Journal of American Dental Association*, 109(5), 706–710.